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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM: Revised Drinking Water Assessment for Molinate

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General Conclusions

This memorandum contains revised levels of molinate metabolites in drinking water, based on the recently-acquired information contained in a DER on the potable water studies (MRID's 41421803 and 41421804). The previous water memorandum (D259945) provided drinking water EEC's for parent molinate and provided an adjustment factor of 1.06 (100 % of parent molinate + 6 % of parent as metabolites). This was based on the results of an aquatic field dissipation study in California (MRID 41421804) that was conducted as part of a larger experiment. However, the registrant submitted the same field dissipation study in California and another study in the Southern U.S. as potable water studies. Based on this new review, EFED recommends using 1.094 and 1.11 as adjustment factors, but notes that these do not take into account another metabolite in the tolerance expression, 4-hydroxy molinate. EFED also notes that the estimates are highly variable. Therefore, EFED recommends the collection of monitoring data for both parent and all residues in the tolerance expression for those locations with estimated concentrations that are close to the DWLOC.

In two potable water studies (MRID's 41421803 and 41421804), concentrations of degradates molinate sulfoxide, molinate acid, and HMI were provided. The tolerance expression for molinate includes parent molinate, molinate sulfoxide, molinate acid, and 4-hydroxy molinate. HMI is not part of the tolerance expression for molinate. Therefore, it was not used in the calculations. The EFED reviewing scientist added the sulfoxide and acid compounds for each sampling interval where parent molinate was observed and divided by the amount of parent molinate present at that

interval. Based on this analysis, the mean percent of molinate sulfoxide and molinate acid as a percent of parent molinate present over the time intervals was 9.4 % and 11 % for 8 EC molinate and 15 G molinate, respectively. However, there is significant uncertainty in these estimates. The coefficients of variation (CV's) for these means were 170 and 139 %, respectively. The percent of degradates ranged from 0-50 % and 0-48 %, respectively. The attached spreadsheet **(D262859.123)** contains the data from the study and the analysis.

Also, the 4-hydroxy molinate degradate was not looked for in the potable water study. However, in a laboratory study intended to represent a rice field (MRID 44956603), 4-hydroxy molinate increased from 2 % of the water extracts at 1 week to 72 % by 8 weeks. While it is uncertain that combining the results of laboratory and field studies will provide meaningful results , EFED does note that the 4-hydroxy molinate degradate has the potential to be found in significant quantities, based on the submitted studies. Therefore, EFED recommends the collection of monitoring data for both parent and all residues in the tolerance expression for those locations with estimated concentrations that are close to the DWLOC.